



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/486,561	02/29/2000	NOBUAKI HASHIMOTO	105030	8576

25944 7590 06/18/2003

OLIFF & BERRIDGE, PLC  
P.O. BOX 19928  
ALEXANDRIA, VA 22320

EXAMINER

CRUZ, LOURDES C

ART UNIT PAPER NUMBER

2827

DATE MAILED: 06/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/486,561

Applicant(s)

HASHIMOTO, NOBUAKI

Examiner

Lourdes C. Cruz

Art Unit

2827

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 May 2003.
- 2a) ☐ This action is **FINAL**.      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,2,5-8,11,12,14-16,21 and 22 is/are pending in the application.

4a) Of the above claim(s) 1,2,5--7 is/are withdrawn from consideration.

- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.

- 6) ☒ Claim(s) 8,11,12,14-16,21 and 22 is/are rejected.

- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.

- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_      6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

The Examiner has discovered Patent No. US658889 disclosing subject matter (including same drawings and same specification) commensurate with the subject matter of the instant application.

#### *Specification*

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

#### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(f) he did not himself invent the subject matter sought to be patented.

(g)(1) during the course of an interference conducted under section 135 or section 291, another inventor involved therein establishes, to the extent permitted in section 104, that before such person's invention thereof the invention was made by such other inventor and not abandoned, suppressed, or concealed, or (2) before such person's invention thereof, the invention was made in this country by another inventor who had not abandoned, suppressed, or concealed it. In determining priority of invention under this subsection, there shall be considered not only the respective dates of conception and reduction to practice of the invention, but also the reasonable diligence of one who was first to conceive and last to reduce to practice, from a time prior to conception by the other.

Claims 8,11,14-16,21,22 are rejected under 35 U.S.C. 102(e) as being anticipated by Tsukagoshi et al. (US5804882).

Tsukagoshi et al. discloses the following (See cover figure):

8. A semiconductor device, comprising: a semiconductor chip 1 having electrodes 2; a substrate 4,5,6' having an interconnect pattern 7; and an adhesive 11, said adhesive having conductive particles 12 dispersed therein, wherein said electrodes and said interconnect pattern are electrically connected via said conductive particles of said adhesive; and wherein said adhesive is interposed between a surface of said substrate on which said interconnect pattern is formed and a surface of said semiconductor chip on which said electrodes are formed, and said adhesive covers substantially all of a lateral surface of said semiconductor chip.

11. The semiconductor device as defined in claim 8, wherein said adhesive is provided to cover said interconnect pattern in its entirety.

14. A circuit board 4 on which is mounted a semiconductor device, the semiconductor device comprising:

a semiconductor chip 1 having electrodes 2; a substrate 5,6' having an interconnect pattern 7; and an adhesive 11, said adhesive having conductive particles 12 dispersed therein; wherein said electrodes and said interconnect pattern are electrically connected via said conductive particles of said adhesive; and wherein said adhesive 11 is interposed between a surface of said substrate on which said interconnect pattern is formed and a surface of said semiconductor chip on which said electrodes are formed, and said adhesive covers substantially all of a lateral surface of said semiconductor chip.

15. An electronic instrument having a semiconductor device, the semiconductor device comprising: a semiconductor chip 1 having electrodes 3; a substrate 4,5,6', having an interconnect pattern 7; and an adhesive 11. said adhesive having conductive particles 12 dispersed therein; wherein said electrodes and said interconnect pattern are electrically connected via said conductive particles of said adhesive; and wherein said adhesive is interposed between a surface of said substrate on which said interconnect pattern is formed and a surface of said semiconductor chip on which said electrodes are formed, and said adhesive covers substantially all of a lateral surface of said semiconductor chip.

16. The semiconductor device as claimed in claim 8, wherein at least a part of said adhesive 11 has a thickness substantially the same as said semiconductor chip.

21. The circuit board as defined in claim 14, wherein a part of said adhesive covering substantially all of the lateral surface of said semiconductor chip has a thickness substantially the same as said semiconductor chip.

22. The electronic instrument as defined in claim 15, wherein a part of said adhesive covering substantially all of the lateral surface of said semiconductor chip has a thickness substantially the same as said semiconductor chip.

Claims 8,11,12,14-16,21,22 are rejected under 35 U.S.C. 102(f) because the applicant did not invent the claimed subject matter.

Specifically, see US 6528889 wherein Matsuhira et al. discloses (See cover Figure) the claimed semiconductor chip 4 having electrodes 8, substrate 1 having interconnect pattern 2, adhesive 5, and particles 9.

Claims 8,11,12,14-16,21,22 are rejected under 35 U.S.C. 102(g) because:

The rejection of claims 8,11,12,14-16,21,22 above over US 6528889 to Matsuhira et al. is a provisional rejection for the purpose of resolving all remaining issues in this application. The provisional assumption that US 6528889 is prior art under 35 U.S.C. 102(g) against this application may or may not be true, and the prosecution in this case will be suspended pending final determination of priority in the interference if and when no other issues remain.

See that US 6528889 discloses all the claimed limitations as discussed above.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsukagoshi et al. (US5804882) in view of Canning et al. (US 5783465).

Tsukagoshi et al. (US5804882) fails to specifically disclose a shading material. See that Canning et al. teaches a shading material "pigment" (Col. 5, lines 14+). It

would have been obvious to one with ordinary skill in the art at the time the invention was made to combine the teachings of Canning et al. to those of Tsukagoshi et al. (US5804882) in order to provide shielding against reflected light.

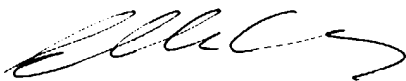
***Response to Arguments***

Applicant's arguments with respect to all the claims have been considered but are moot in view of the new grounds of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elle Cruz whose telephone number is 703-306-5691. The examiner can normally be reached on M-F 10-6:30.

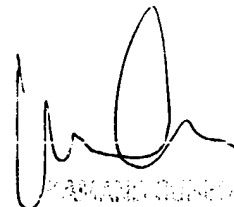
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L. Talbott can be reached on 703-305-9883. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.



Elle Cruz  
June 13, 2003

Lourdes C. Cruz  
Examiner  
Art Unit 2827



KAMARU GUNO  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER